

A large, stylized letter 'A' is formed using the characters 'S' and 'Y'. The letter is symmetrical and composed of multiple rows of these characters. The top of the 'A' is formed by a row of 'S's, followed by rows of 'Y's and 'S's. The sides of the 'A' are formed by rows of 'S's and 'Y's. The bottom of the 'A' is formed by a row of 'S's. The overall shape is a wide, triangular 'A' with a small gap in the center of the top bar.

SY
VO[illegible]

(1)	42	HISTORY		: DETAILED
(1)	51	DECLARATIONS		
(1)	77	EXES\$SETAST	- SET AST ENABLES	
(1)	129	EXES\$DCLAST	- DECLARE AST SYSTEM SERVICE	

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0000 1
0000 2
0000 3      .TITLE  SYSASTCON ASTCONTROL SYSTEM SERVICES
0000 4      .IDENT  'V04-000'
0000 5
0000 6 *****
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0000 25 *
0000 26 *
0000 27 *****
0000 28
0000 29 ++
0000 30 ++ FACILITY: EXECUTIVE, SYSTEM SERVICES
0000 31
0000 32 ABSTRACT:
0000 33 THIS MODULE CONTAINS THE SYSTEM SERVICES SETAST WHICH CONTROLS
0000 34 THE STATE OF THE AST ENABLES AND DCLAST WHICH DECLARES AN
0000 35 AST FOR A PARTICULAR ACCESS MODE.
0000 36
0000 37 ENVIRONMENT:
0000 38
0000 39 --
0000 40
0000 41 .PAGE
0000 42 .SBTTL HISTORY ; DETAILED
0000 43
0000 44 AUTHOR: R. HUSTVEDT CREATION DATE: 21-SEP-76
0000 45
0000 46 MODIFIED BY:
0000 47 : VERSION
0000 48 01 -
0000 49
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0000 51      .SBTTL  DECLARATIONS
0000 52
0000 53 :
0000 54 : INCLUDE FILES:
0000 55 :
0000 56      $ACBDEF      : DEFINE AST CONTROL BLOCK OFFSETS
0000 57      $IPLDEF      : DEFINE IPL VALUES
0000 58      $PCBDEF      : DEFINE PCB OFFSETS
0000 59      $PRDEF       : DEFINE PROCESSOR REGISTER VALUES
0000 60      $PSLDEF      : DEFINE PSL FIELDS
0000 61      $RSNDEF      : DEFINE RESOURCE NUMBERS
0000 62      $SSDEF       : DEFINE STATUS CODE VALUES
0000 63
0000 64 :
0000 65 : EQUATES:
0000 66 :
0000 67
0000000C 0000 68 ACMODE=12      : DISPLACEMENT TO ACCESS MODE
00000004 0000 69 AST=4         : DISPLACEMENT TO AST ADDRESS
00000008 0000 70 ASTPRM=8      : DISPLACEMENT TO AST PARAMETER
00000004 0000 71 ENABLE=4     : DISPLACEMENT TO ENABLE ARGUMENT
0000 72 :
0000 73 : OWN STORAGE:
0000 74 :
00000000 75      .PSECT  YSEXEPAGED,BYTE      : PAGED PSECT

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0000 77 .SBTTL EXESSETAST - SET AST ENABLES
0000 78
0000 79 :++
0000 80 : FUNCTIONAL DESCRIPTION:
0000 81 : EXESSETAST ALLOWS A PROCESS TO ENABLE OR DISABLE THE DELIVERY
0000 82 : OF ASTS FOR THE PROCESS AT THE ACCESS MODE ISSUING THE CALL TO
0000 83 : EXESSETAST. THE PREVIOUS STATE OF THE AST ENABLE FOR THAT
0000 84 : ACCESS MODE IS RETURNED IN BIT 1 OF REGISTER 0 AS PART OF
0000 85 : THE SUCCESSFUL COMPLETION STATUS CODE.
0000 86
0000 87 : CALLING SEQUENCE:
0000 88 : CALLG  ARGLIST,EXESSETAST
0000 89
0000 90 : INPUT PARAMETERS:
0000 91 : 04(AP) - NEW SETTING FOR AST ENABLE
0000 92 : R4 - PCB ADDRESS OF CURRENT PROCESS
0000 93
0000 94 : IMPLICIT INPUTS:
0000 95 : SCH$GL_CURPCB - POINTER TO CURRENT PROCESS PCB
0000 96
0000 97 : OUTPUT PARAMETERS:
0000 98 : R0 - COMPLETION STATUS CODE
0000 99
0000 100 : IMPLICIT OUTPUTS:
0000 101 : AST ENABLE FOR PREVIOUS MODE IS SET ACCORDING TO ARGUMENT
0000 102
0000 103 : THE NEW SETTING FOR THE ASTLVL REGISTER IS PLACED BOTH IN
0000 104 : THE PROCESSOR REGISTER AND THE CURRENT HARDWARE PCB.
0000 105
0000 106 : COMPLETION CODES:
0000 107 : $$$_WASCLR - AST ENABLE FOR ACCESS MODE WAS CLEAR
0000 108 : $$$_WASSET - AST ENABLE FOR ACCESS MODE WAS SET
0000 109
0000 110 : SIDE EFFECTS:
0000 111 : ANY PENDING ASTS FOR THIS PROCESS WHICH BECOME DELIVERABLE
0000 112 : AS A RESULT OF SETTING AN AST ENABLE MAY BE DELIVERED UPON
0000 113 : EXIT FROM THIS SERVICE.
0000 114
0000 115 :--
0000 116
0000 117 EXESSETAST::
0000 118 : SET AST ENABLE SYSTEM SERVICE
0000 119 : SAVE REGISTERS R2-R5
0000 120 : GET CURRENT PSL
0000 121 : EXTRACT PREVIOUS MODE
0000 122 : ASSUME SET
0000 123 : TEST OLD ENABLE SETTING
0000 124 : IT WAS CLEAR
0000 125 : SET NEW ENABLE VALUE
0000 126 : COMPUTE NEW ASTLVL
0000 127 : SET COMPLETION STATUS
0000 128 : AND RETURN TO CALLER

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```

51 51 02 51 003C 0000
03 0D A4 51 EF 0002
55 09 3C 0004
55 01 E0 0009
0D A4 01 51 55 01 3C 000C
04 AC F0 0011
FF E2 30 0014
50 55 D0 001B
04 0021 126

```



```
0022 129 .SBTTL EXESDCLAST - DECLARE AST SYSTEM SERVICE
0022 130
0022 131 :++
0022 132 : FUNCTIONAL DESCRIPTION:
0022 133 : EXESDCLAST ALLOWS A PROCESS TO ENQUEUE AN AST FOR THE ACCESS
0022 134 : MODE ISSUING THE CALL OR A LESS PRIVILEGED ACCESS MODE.
0022 135
0022 136 : CALLING SEQUENCE:
0022 137 : CALLG ARGLIST,EXESDCLAST
0022 138
0022 139 : INPUT PARAMETERS:
0022 140 : 04(AP) - ADDRESS OF AST ROUTINE
0022 141 : 08(AP) - AST PARAMETER
0022 142 : 12(AP) - ACCESS MODE AT WHICH TO ENQUEUE AST
0022 143 : R4 - PCB ADDRESS OF CURRENT PROCESS
0022 144
0022 145 : IMPLICIT INPUTS:
0022 146 : CURRENT PCB
0022 147
0022 148 : OUTPUT PARAMETERS:
0022 149 : R0 - COMPLETION STATUS
0022 150
0022 151 : IMPLICIT OUTPUTS:
0022 152 : NONE
0022 153
0022 154 : SIDE EFFECTS:
0022 155 : THE ENQUEUEING OF AN AST WILL EVENTUALLY CAUSE A DIVERSION
0022 156 : OF CONTROL TO OCCUR WHICH WILL CAUSE THE AST ROUTINE TO BE
0022 157 : CALLED.
0022 158
0022 159 : COMPLETION CODES:
0022 160 : $$$_NORMAL - NORMAL SUCCESSFUL COMPLETION STATUS
0022 161 : $$$_EXQUOTA - QUOTA EXCEEDED FOR AST CONTROL BLOCKS
0022 162 : $$$_INSFMEM - INSUFFICIENT DYNAMIC MEMORY
0022 163
0022 164 :--
0022 165
0022 166 EXESDCLAST::
0022 167 .WORD ^M<R2,R3,R4,R5> ; DECLARE AST SYSTEM SERVICE
0022 168 TSTW PCBSW_ASTCNT(R4) ; SAVE REGISTERS R2-R5
0022 169 BLEQ 20$ ; TEST FOR QUOTA
0022 170 BSBW EXESALLOCIRP ; YES, ERROR RETURN
0022 171 BLBC R0,10$ ; ALLOCATE PACKET
0022 172 DECW PCBSW_ASTCNT(R4) ; DID NOT GET IT
0022 173 MOVL R2,R5 ;:: ACCOUNT FOR IT
0022 174 EXTZV #0,#2,ACMODE(AP),R0 ;:: SAVE BASE ADDRESS OF ACB
0022 175 BSBW EXESMAXACMODE ; GET ACCESS MODE ARGUMENT
0022 176 BISB #<1@ACBSV QUOTA>,R0 ; MAXIMIZE ACCESS MODE
0022 177 MOVB R0,ACBSB_RMOD(R5) ; SET QUOTA FLAG FOR PROCESS
0022 178 MOVL PCBSL_PID(R4),ACBSL_PID(R5) ; SET ACCESS MODE FOR AST
0022 179 MOVQ AST(AP),ACBSL_AST(R5) ; SET PID IN AST CB
0022 180 CLRL R2 ; STORE AST,ASTPRM
0022 181 BSBW SCHSQAST ; NULL PRIORITY INCR
0022 182 MOVZWL #$$$_NORMAL,R0 ; AND ENQUEUE IT
0022 183 SETIPL #0 ; SET NORMAL STATUS
0022 184 RET ; ENABLE
0022 185 10$: MOVZWL #$$$_EXQUOTA,R0 ; AND RETURN TO CALLER
0022 185 20$: ; SET ERROR STATUS
```

50 OC AC 02 00 EF 0035 174
50 0B A5 50 90 0042 177
10 A5 04 AC 7D 004B 179
50 01 3C 0052 181
50 1C 3C 005C 185

SYSASTCON
V04-000

ASTCONTROL SYSTEM SERVICES
EXESDCLAST - DECLARE AST SYSTEM SERVICE

F 16

16-SEP-1984 01:41:51
5-SEP-1984 03:48:56

VAX/VMS Macro V04-00
[SYS.SRC]SYSASTCON.MAR;1

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(1)

04 005F 186
0060 187

RET
.END

; RETURN

SYSASTCON
Symbol table

ASTCONTROL SYSTEM SERVICES

G 16

16-SEP-1984 01:41:51
5-SEP-1984 03:48:56

VAX/VMS Macro V04-00
[SYS.SRC]SYSASTCON.MAR;1

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(1)

ACBSB_RMOD	=	0000000B		
ACBSL_AST	=	00000010		
ACBSL_PID	=	0000000C		
ACBSV_QUOTA	=	00000006		
ACMODE	=	0000000C		
AST	=	00000004		
ASTPRM	=	00000008		
ENABLE	=	00000004		
EXESALLOCIRP	*****		X	02
EXESDCLAST	00000022	RG		02
EXESMAXACMODE	*****		X	02
EXESSETAST	00000000	RG		02
PCBSB_ASTEN	=	0000000D		
PCBSL_PID	=	00000060		
PCBSW_ASTCNT	=	00000038		
PRS_IPL	=	00000012		
PSLSS_PRVMOD	=	00000002		
PSLSV_PRVMOD	=	00000016		
SCH\$NEWLVL	*****		X	02
SCH\$QAST	*****		X	02
SS\$EXQUOTA	=	0000001C		
SS\$NORMAL	=	00000001		
SS\$WASCLR	=	00000001		
SS\$WASSET	=	00000009		

! Psect synopsis !

PSECT name	Allocation	PSECT No.	Attributes														
. ABS .	00000000 (0.)	00 (0.)	NOPIC	USR	CON	ABS	LCL	NOSHR	NOEXE	NORD	NOWRT	NOVEC	BYTE				
\$ABSS	00000000 (0.)	01 (1.)	NOPIC	USR	CON	ABS	LCL	NOSHR	EXE	RD	WRT	NOVEC	BYTE				
Y\$EXEPAGED	00000060 (96.)	02 (2.)	NOPIC	USR	CON	REL	LCL	NOSHR	EXE	RD	WRT	NOVEC	BYTE				

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	36	00:00:00.05	00:00:02.65
Command processing	125	00:00:00.54	00:00:04.92
Pass 1	258	00:00:06.47	00:00:25.37
Symbol table sort	0	00:00:01.08	00:00:03.53
Pass 2	49	00:00:01.19	00:00:03.69
Symbol table output	5	00:00:00.04	00:00:00.04
Psect synopsis output	1	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	476	00:00:09.41	00:00:40.53

The working set limit was 1350 pages.
36358 bytes (72 pages) of virtual memory were used to buffer the intermediate code.
There were 40 pages of symbol table space allocated to hold 717 non-local and 3 local symbols.
187 source lines were read in Pass 1, producing 13 object records in Pass 2.
15 pages of virtual memory were used to define 14 macros.

! Macro library statistics !

Macro library name	Macros defined
-----	-----
\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	5
\$255\$DUA28:[SYS.LIB]STARLET.MLB;2	6
TOTALS (all libraries)	11

800 GETS were required to define 11 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$:SYSASTCON/OBJ=OBJ\$:SYSASTCON MSRC\$:SYSASTCON/UPDATE=(ENH\$:SYSASTCON)+EXECMLS/LIB

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